

# **CLAIM AMENDMENTS**

## **Claim Amendment Summary**

### **Claims pending**

- Before this Amendment: Claims 1-13, 15-19, 21-43, 45-54.
- After this Amendment: Claims 1-6, 8-13, 15-19, 21-27, 29-43, 45-54, and 55

**Non-Elected, Canceled, or Withdrawn claims:** 7 and 28

**Amended claims:** 1, 8-10, 19, 29-31, 37, and 41

**New claim:** 55

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## **Claims:**

**1. (Currently Amended)** A method comprising:

encoding a plurality of features of a label with a private key to provide a medium certificate, wherein the plurality of features comprise coordinates of a plurality of optical fiber strands present on the label;

decoding the medium certificate with a public key; and

verifying the decoded medium certificate against the plurality of label features to determine whether the label is genuine, wherein the verifying comprises:

obtaining at least two shots of the label;

extracting data from the label shots;

determining a motion transformation function of the extracted data; and

forming a multi-dimensional map of the plurality of label features.

**2. (Previously Presented)** A method as recited by claim 1, wherein the coordinates comprise coordinates of each end of the plurality of optical fiber strands present on the label.

**3. (Original)** A method as recited by claim 1, wherein the medium certificate is provided with the label.

**4. (Previously Presented)** A method as recited by claim 1, wherein the medium certificate is provided with the label and the medium certificate is represented as one or more items selected from a plurality comprising:

a bar code; and

an RFID.

**5. (Original)** A method as recited by claim 1, wherein the medium certificate is provided remotely.

**6. (Original)** A method as recited by claim 1, wherein the medium certificate is provided remotely through data stored in a database.

**7. (Canceled)**

**8. (Currently Amended)** A method as recited by claim [[7]] 1, wherein the multi-dimensional map of the plurality of label features is formed as a function of the coordinates of each end of at least one of the plurality of optical fiber strands and has a dimension selected from a group comprising about two, three, and four wherein the dimension comprises a number determined based on a number of coordinate values mapped via a capture function.

**9. (Currently Amended)** A method as recited by claim [[7]] 1, wherein the extracted data comprises data selected from a group comprising guide pattern coordinates and lit fiber end coordinates.

**10. (Currently Amended)** A method as recited by claim [[7]] 1, wherein the multi-dimensional map of the plurality of label features is compressed.

**11. (Original)** A method as recited by claim 1, wherein data regarding the plurality of label features is compressed prior to the encoding.

**12. (Previously Presented)** A method as recited by claim 1, wherein the plurality of label features comprise one or more features selected from a plurality of features, the plurality of features comprising optical fiber length, optical fiber curvature,

optical fiber relative light intensity, optical fiber florescence, optical fiber color, and optical fiber thickness.

**13. (Previously Presented)** A method as recited by claim 1, further comprising binding an application certificate to the medium certificate, wherein the application certificate is generated based at least in part on application data comprising a vendor-specific private key.

**14. (Canceled)**

**15. (Original)** A method as recited by claim 1, further comprising binding an application certificate to the medium certificate, wherein the application certificate is provided by using a private key.

**16. (Original)** A method as recited by claim 1, further comprising:  
binding an application certificate to the medium certificate; and  
verifying that the application certificate corresponds to the medium certificate to determine if the label is genuine.

**17. (Original)** A method as recited by claim 16, wherein the verification of the application certificate is performed by using a public key.

**18. (Original)** One or more computer readable media storing computer executable instructions that, when executed, perform the method as recited in claim 1.

**19. (Currently Amended)** A method comprising:  
encoding a plurality of features of a label to provide a medium certificate;  
providing an identifying indicia corresponding to the medium certificate; and  
verifying the identifying indicia against the plurality of features of the label to determine whether the label is genuine, wherein the plurality of label features comprise coordinates of a plurality of optical fiber strands present on the label and wherein the verifying comprises:

obtaining at least two shots of the label;

extracting data from the label shots;

determining a motion transformation function of the extracted data; and

forming a multi-dimensional map of the plurality of label features.

**20. (Canceled)**

**21. (Original)** A method as recited by claim 19, wherein the medium certificate is provided by using a private key.

**22. (Original)** A method as recited by claim 19, wherein the verifying is performed by using a public key.

**23. (Original)** A method as recited by claim 19, wherein the identifying indicia is provided with the label.

**24. (Previously Presented)** A method as recited by claim 19, wherein the plurality of label features further comprise one or more features selected from a group comprising optical fiber length, optical fiber curvature, optical fiber relative light intensity, optical fiber florescence, optical fiber color, and optical fiber thickness.

**25. (Original)** A method as recited by claim 19, wherein the identifying indicia is provided with the label and the identifying indicia is one or more items selected from a group comprising a bar code and an RFID.

**26. (Original)** A method as recited by claim 19, wherein the identifying indicia is provided remotely.

**27. (Original)** A method as recited by claim 19, wherein the identifying indicia is provided remotely through data stored in a database.

**28. (Canceled)**

**29. (Currently Amended)** A method as recited by claim ~~[[28]]~~ 19, wherein the multi-dimensional map of the plurality of label features has a dimension selected from a group comprising about two, three, and four.

**30. (Currently Amended)** A method as recited by claim ~~[[28]]~~ 19, wherein the extracted data comprises data selected from a group comprising guide pattern coordinates and lit fiber end coordinates.

**31. (Currently Amended)** A method as recited by claim ~~[[28]]~~ 19, wherein the multi-dimensional map of the plurality of label features is compressed.

**32. (Original)** A method as recited by claim 19, wherein data regarding the plurality of label features is compressed prior to the encoding.

**33. (Original)** A method as recited by claim 19, further comprising binding an application certificate to the medium certificate.

**34. (Original)** A method as recited by claim 19, further comprising binding an application certificate to the medium certificate, wherein the application certificate comprises application data.

**35. (Original)** A method as recited by claim 19, further comprising binding an application certificate to the medium certificate, wherein the application certificate is provided by using a private key.

**36. (Original)** A method as recited by claim 19, further comprising binding an application certificate to the medium certificate, wherein the application certificate is provided by a hash value of the medium certificate.

**37. (Currently Amended)** A method as recited by claim 19, further comprising binding an application certificate to the medium certificate, wherein the application certificate is provided by ~~appends~~ appending a hash value of the medium certificate to application data to form extended application data.

**38. (Original)** A method as recited by claim 19, further comprising:  
binding an application certificate to the medium certificate; and  
verifying that the application certificate corresponds to the medium certificate to determine if the label is genuine.

**39. (Original)** A method as recited by claim 38, wherein the verification of the application certificate is performed by using a public key.



**40. (Original)** One or more computer readable media storing computer executable instructions that, when executed, perform the method as recited in claim 19.

**41. (Currently Amended)** A system comprising:

- a processor;
- a system memory coupled to the processor;
- a medium scanner operatively coupled to the processor to scan a plurality of features of a label;
- a label encoder to encode the plurality of label features as a medium certificate, wherein the plurality of label features comprise: a multi-dimensional map of the plurality of label features formed by a process comprising:
  - obtaining at least two shots of the label;
  - extracting data from the label shots, wherein the extracted data comprises  
coordinates of a plurality of optical fiber strands present on the label;
  - determining a motion transformation function of the extracted data; and
- a label printer to print the medium certificate on the label.

**42. (Original)** A system as recited by claim 41, wherein data regarding the scanned plurality of label features is compressed prior to encoding.

**43. (Original)** A system as recited by claim 41, wherein the label printer further prints an application certificate on the label.

**44. (Canceled)**

**45. (Previously Presented)** A system as recited by claim 41, wherein the plurality of label features further comprise one or more features selected from a group comprising optical fiber length, optical fiber curvature, optical fiber relative light intensity, optical fiber florescence, optical fiber color, and optical fiber thickness.

**46. (Original)** A system as recited by claim 41, further comprising a label scanner to verify the medium certificate against the plurality of label features.

**47. (Original)** A system as recited by claim 41, further comprising an application label encoder to encode application data bound to the medium certificate as an application certificate.

**48. (Original)** A system as recited by claim 41, further comprising a verification system comprising:

a label scanner to scan the medium certificate off of the label; and

a verification medium scanner to scan the plurality of label features,

wherein if the medium certificate is decoded using a public key and the decoded medium certificate matches the scanned plurality of the label features by the verification medium scanner, the label is declared as genuine.

**49. (Original)** A system as recited by claim 48, wherein the matching is determined based on a threshold value.

**50. (Original)** A system as recited by claim 41, further comprising a verification system comprising:

a label scanner to scan the medium certificate off of the label; and

a verification medium scanner to scan the plurality of label features,

wherein if the medium certificate is decoded using a public key and the decoded medium certificate does not match the scanned plurality of the label features by the verification medium scanner, the label is declared as counterfeit.

**51. (Original)** A system as recited by claim 50, wherein the matching is determined based on a threshold value.

**52. (Previously Presented)** A method as recited by claim 1, wherein the plurality of optical fiber strands present on the label comprise strands of at least lighting-grade optical fiber.

**53. (Previously Presented)** The method of claim 19 further comprising

scanning the label to determine identifying indicia which corresponds to the medium certificate, the scanning comprising a method selected from a group consisting of: fixed partition scanning and sweep-line scanning,

wherein providing an identifying indicia corresponding to the medium certificate comprises providing the identifying indicia which corresponds to the medium certificate.

**54. (Previously Presented)** A system as recited by claim 41, wherein the medium scanner facilitates scanning via a method selected from a group consisting of: fixed partition scanning and sweep-line scanning.

**55. (New)** A method as recited by claim 1, further comprising binding an application certificate to the medium certificate, wherein the application certificate comprises application data.